SNIA Qualified Storage Virtualization Exam Description & Preparation Guide

Audience

The candidate for this exam would like to validate their storage and data protection knowledge. Must have IT experience but not necessarily be a storage specialist. Basic knowledge of storage fundamentals and virtualization is suggested as well as strategies and solutions as they apply to various areas within a storage environment.

Tasks/Knowledge/Skills & Abilities - This credential signifies that the candidate can:

- Define Virtualization Concepts
- Describe the Benefits of Virtualization
- Identify the Potential Pain Points of Virtualization
- Describe virtualization implementation strategies
- Explain administrative and management tasks required for virtualization

Test Parameters

- ✓ The delivery channel for this test is the Prometric IBT on-line testing system worldwide. http://ibt.prometric.com/SNIA
- ✓ The exam format is multiple-choice with multiple-responses where appropriate and noted.
- ✓ The maximum testing time allowed for the exam is 60 minutes
- ✓ The exam language is currently English.

Prerequisite Exam

- ✓ SNIA Storage Network Foundations (S10-101) Recommended.

Passing Score: 65%

Number of Exam Items: 55

Price: $100

Time Limit: 90 minutes worldwide

SNIA Qualified Data Protection Associate (SQSVA) - Topics to Study

Exam items will be drawn from this blueprint and study material.

1 **Define Virtualization**
- ***1.1*** Describe virtualization at the server
- ***1.2*** Describe virtualization of storage resources
- ***1.3*** Describe virtualization within the network
- ***1.4*** Explain how virtualization can simplify business policies and procedures (e.g., standards, support)
- ***1.5*** Determine how virtualization can achieve high availability and business continuity solutions

2 **Describe the Benefits of Virtualization**
- ***2.1*** Explain how/why virtualization improves system utilization
- ***2.2*** Explain methods that virtualization helps the storage network infrastructure
- ***2.3*** Describe ways virtualization reduces costs
- ***2.4*** List storage network performance improvements from virtualization
- ***2.5*** Describe the data center restrictions virtualization addresses
- ***2.6*** Explain how virtualization is not impacted by data center restrictions (i.e. floor space, power and/or cooling)
- ***2.7*** Compare and contrast reduced acquisition cost and TCO

3 **Identify the Potential Pain Points of Virtualization**
- ***3.1*** Describe how over-provisioning impact performance in virtualized environments
- ***3.2*** Describe additional hardware and/or software components necessary for network or storage virtualization
- ***3.3*** Troubleshoot network virtualization issues
- ***3.4*** Troubleshoot server-based virtualization issues
- ***3.5*** Troubleshoot storage virtualization issues
- ***3.6*** Compare and contrast technology appropriate for high availability (i.e. active/active, active/standby, N+1 distribution, N-way distribution)
- ***3.7*** Describe impact scope of virtualization failures (i.e. hosts, networking, storage and application)

4 **Describe Virtualization Implementation Strategies**
- ***4.1*** Compare virtualization methodologies (in-band and out-of-band)
- ***4.2*** Explain the differences of file and block virtualization
- ***4.3*** Explain locations within storage network environments that can benefit from virtualization (i.e. application / host / network / storage)
- ***4.4*** Describe storage implementation methods (disk and tape)
- ***4.5*** Explain virtualization's aggregation of multiple file systems into one virtual file system
- ***4.6*** Describe necessary components for host-based virtualization
- ***4.7*** Explain how storage virtualization assists business continuance and disaster recovery (i.e. snapshots (PIT disk to disk copies and advanced data replication))

5 **Explain Administrative and Management Tasks Required for Virtualization**
- ***5.1*** Explain the use of thresholds as a tool to manage virtualized resources
- ***5.2*** Describe factors to monitor storage capacity (i.e. time and space)
- ***5.3*** Discuss the use of automation to auto-recover from events
- ***5.4*** Explain end-to-end monitoring requirements for virtualized storage network environment
- ***5.5*** Explain why a common management interface is necessary for routine t

Reference List

SNIA Tutorials about Storage Virtualization www.snia.org/tutorials

Storage Virtualization I - What, Why, Where and How?

Rob Peglar

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Storage Virtualization is one of the buzzwords in the industry, especially with the near-ubiquitous deployment of Storage Networks. But besides all hype, there is a lot of confusion, too. Companies are using the term virtualization and its characteristics in various and different forms. This tutorial describes the reasons and benefits of virtualization in a technical and neutral way. The audience will understand the various terms and will receive a clear picture of the different virtualization approaches. Links to the SNIA Shared Storage Model and the usage of the new SNIA Storage Virtualization Taxonomy will help to achieve this goal. This tutorial is intended for IT Managers, Storage and System Administrators who have responsibilities for IT infrastructures and storage management tasks.

Learning Objectives

- Understand the definition of storage virtualization and its taxonomy
- Learn about the three categories/methods of storage virtualization and their architectures
- Understand which storage virtualization techniques apply to various new and existing infrastructures and potential benefits to storage management

Storage Virtualization II - Effective Use of Virtualization

Rob Peglar

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The second part of this tutorial builds on the first one, so the audience should have visited part I or already should have a basic understanding of this subject. Storage Virtualization part II covers practical issues of block virtualization in order to make most effective use of it. Among other topics it describes the implementation step by step and aspects of availability, performance and capacity improvements. The material discusses the role of storage virtualization within policy-based management and describes its integration in the SNIA Storage Management Initiative Specification (SMI-S).

- Learning Objectives
- Understand the role of virtualization in improving storage availability, performance and capacity management
- Learn about potential policy-based management using virtual techniques
- Understand how storage virtualization fits into the SNIA SMI-S and Web Services (SOA) architectures